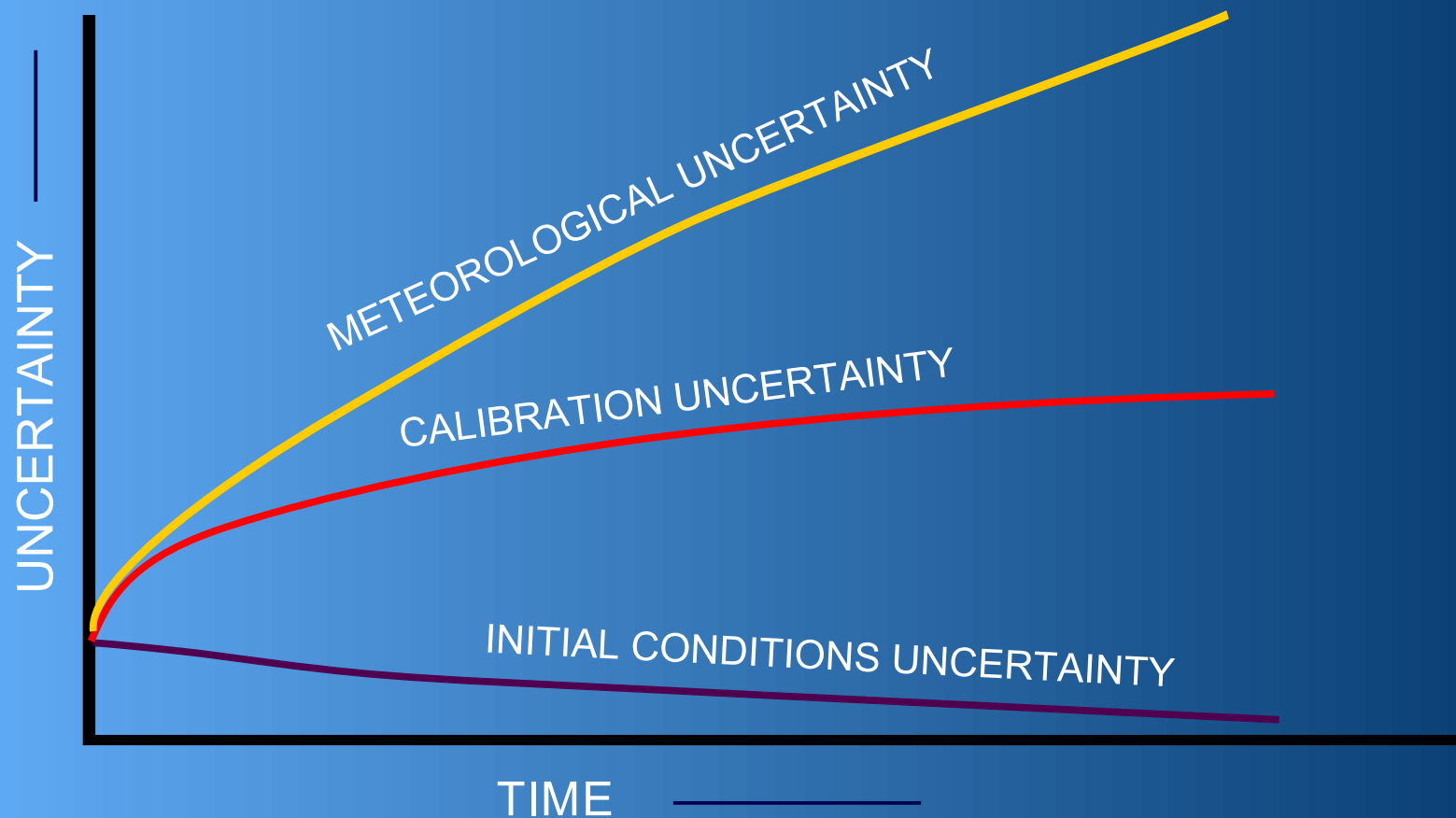


Probabilistic Hydrologic Forecasting

Assessing the Uncertainty in a Forecast

Uncertainty in Hydrologic Forecasts

Uncertainty is the reason we need to do probabilistic forecasting.

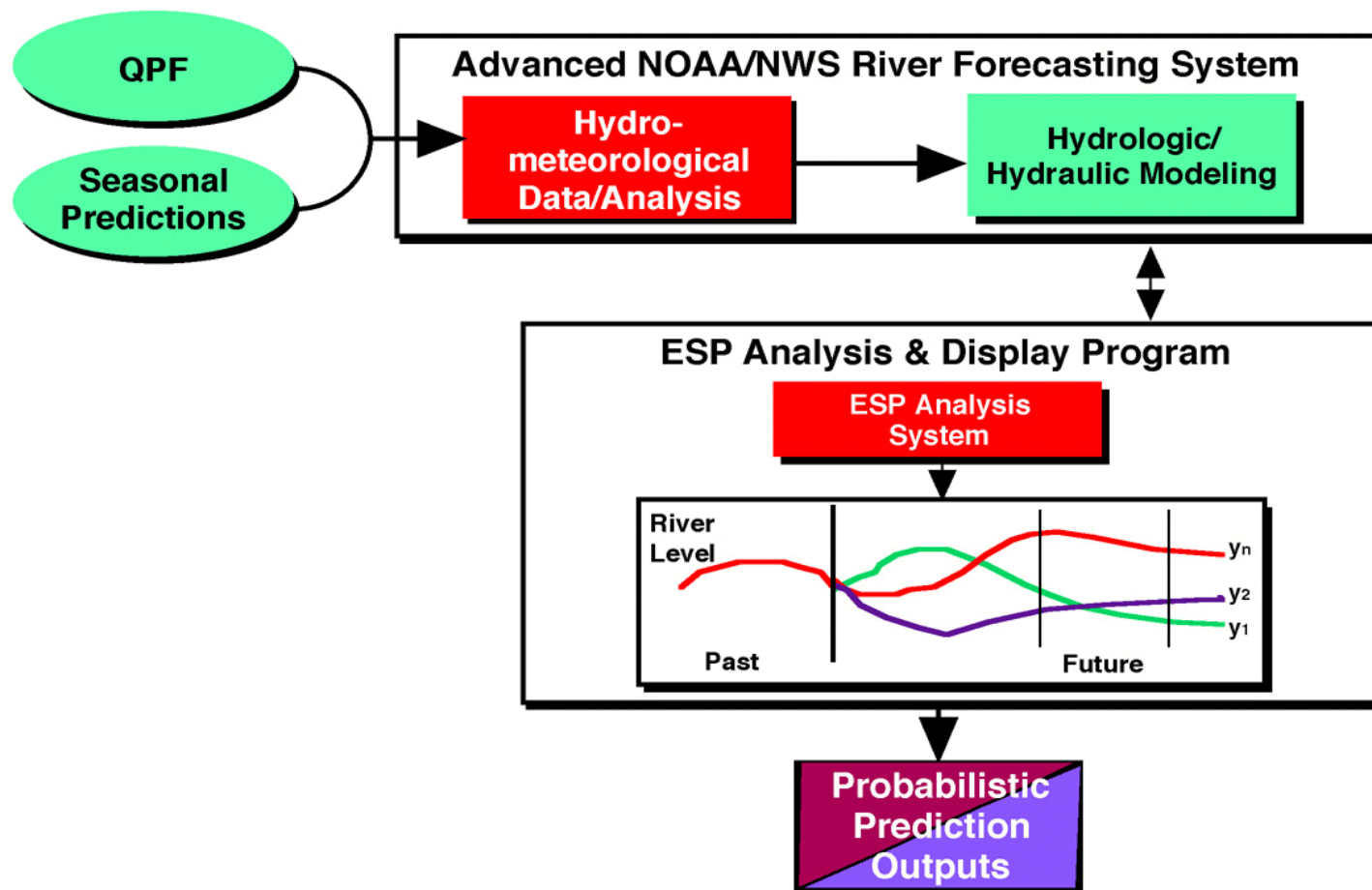


Assessing Uncertainty

In general the NWS has used ensembles and probabilities.

- Assessing the Uncertainty
 - ▶ Ad hoc scenarios
 - ▶ Review of like cases
 - ▶ Kalman filtering and uncertainty propagation
 - ▶ Analytic transformations (Bayesian Forecast System)
 - ▶ Climate ensembles and analog years
 - ▶ Synthetic ensembles

Ensemble Streamflow Forecasting

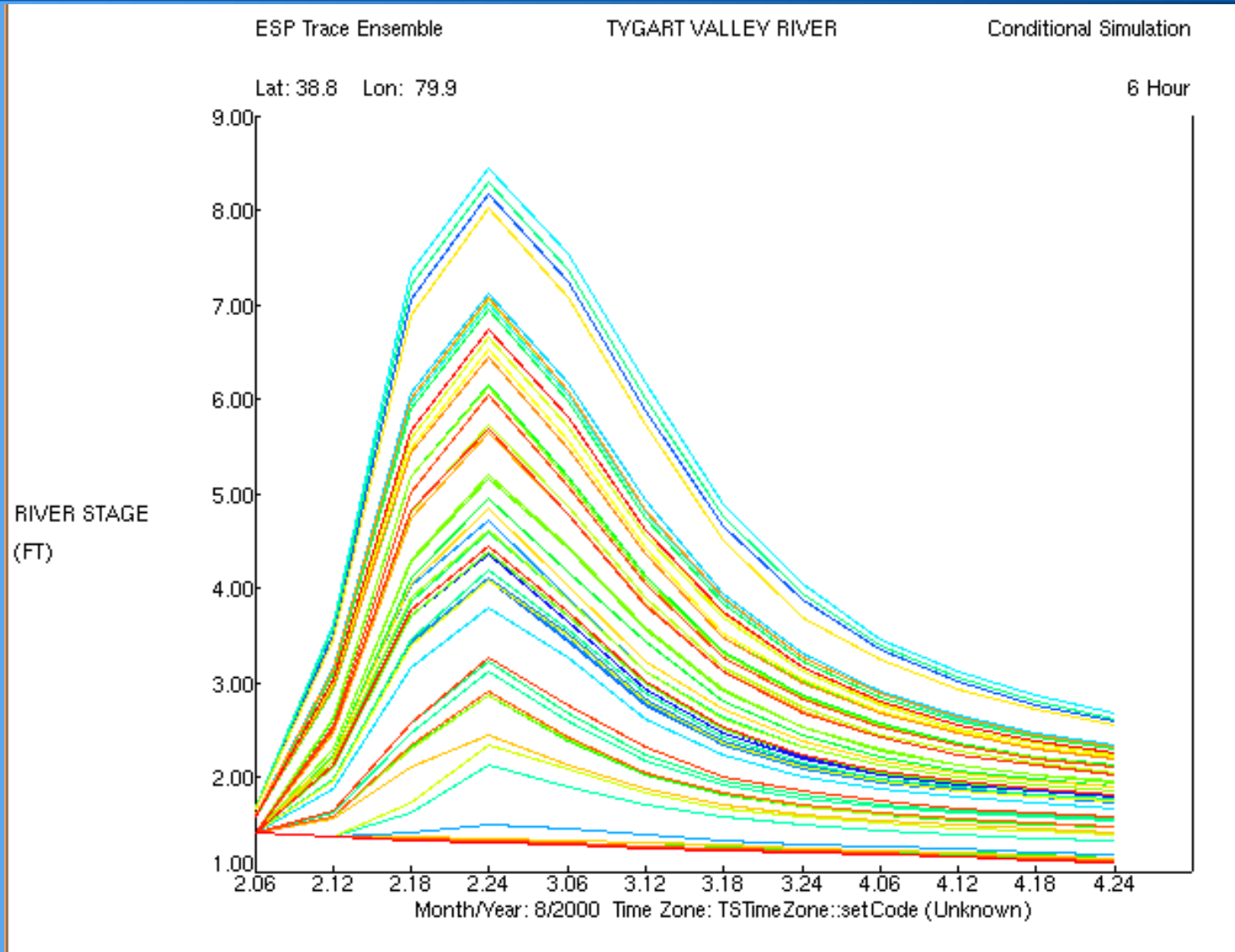


Describing Uncertainty

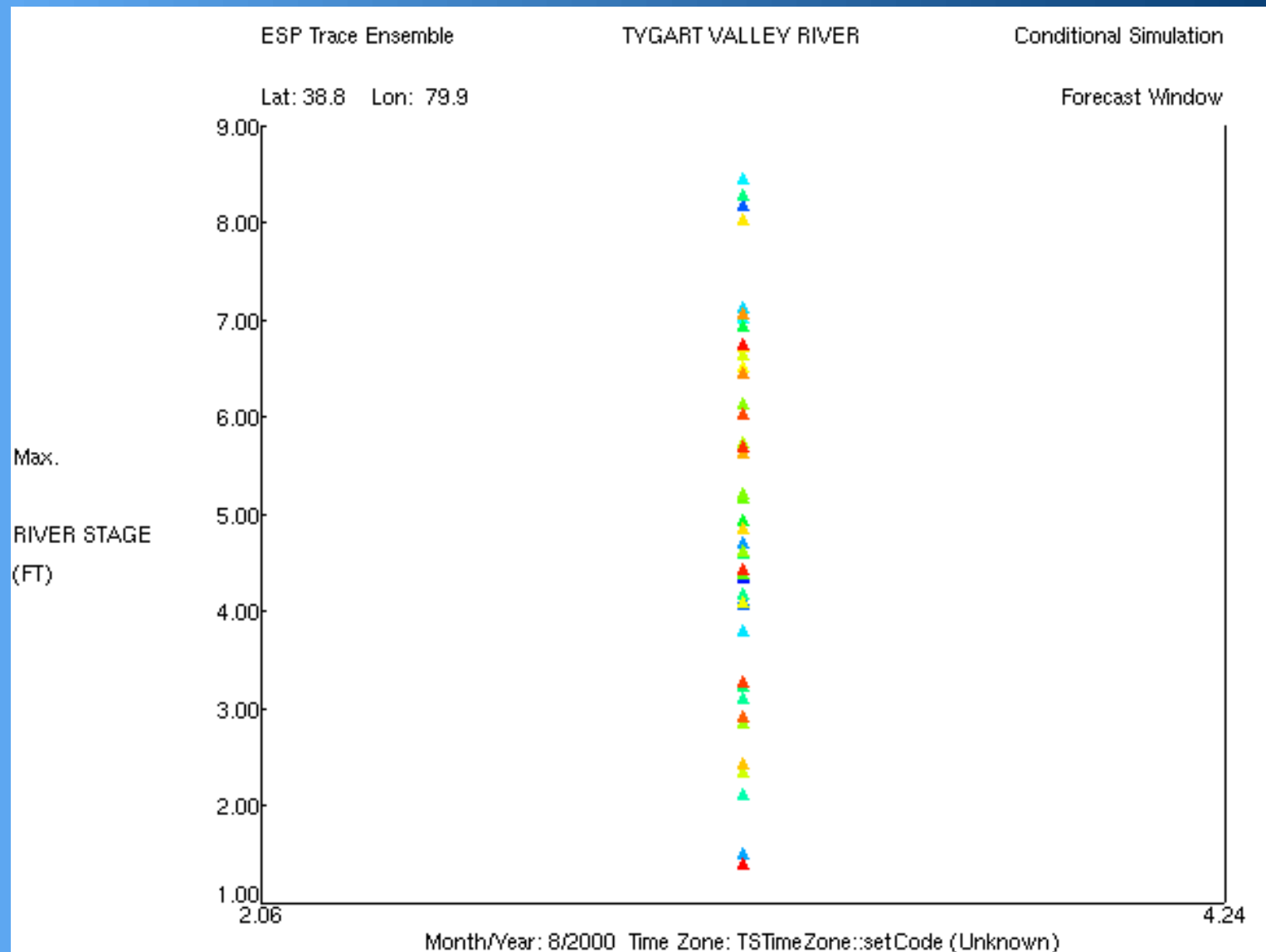
Formatting a Forecast is Also a Complex Issue

- Describing the Uncertainty
 - ▶ Text (likely to reach)
 - ▶ Numerical Ranges
 - ▶ Probabilities
 - How do we present a distribution in understandable terms?

Sample Product

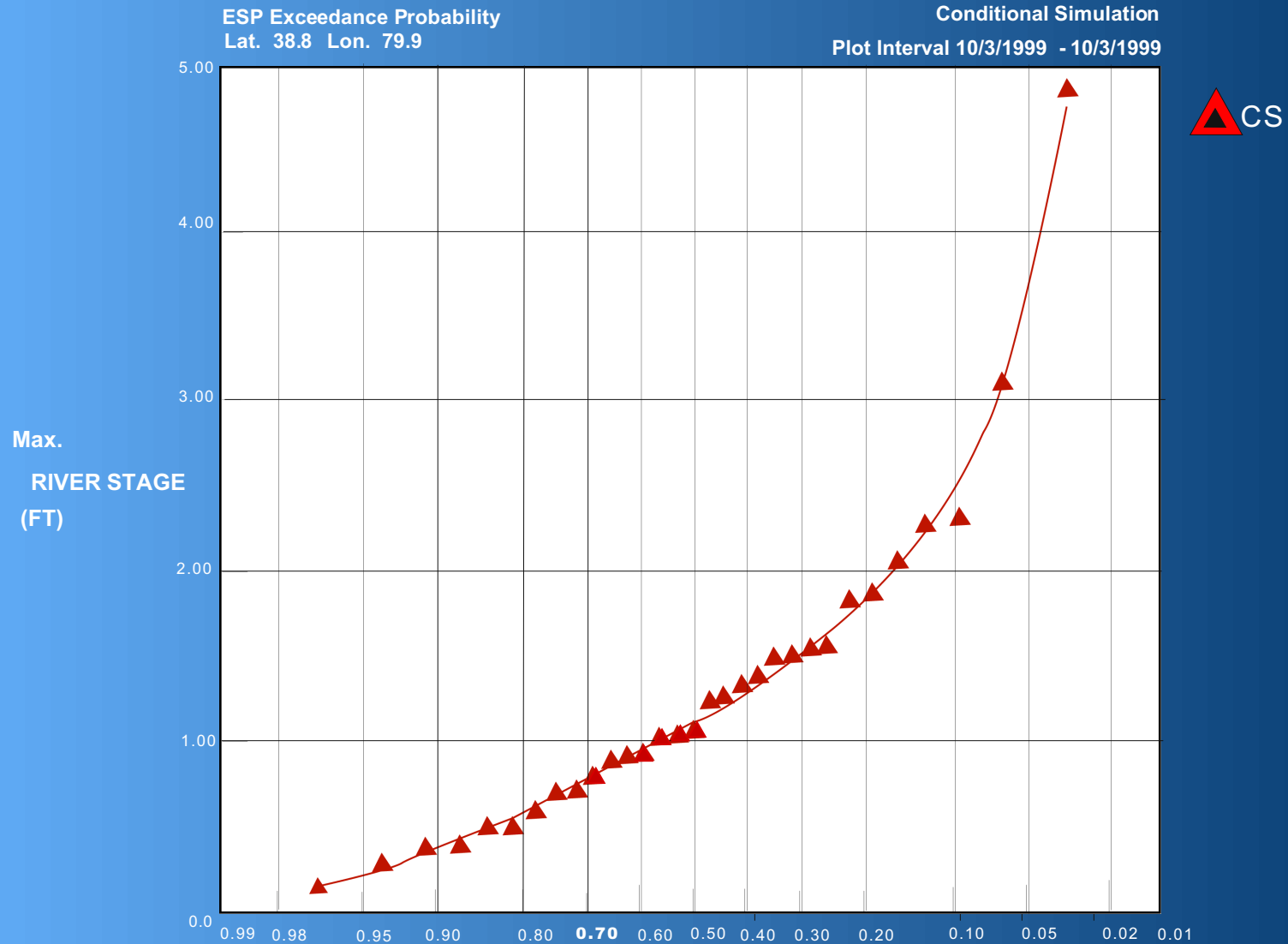


Sample Product

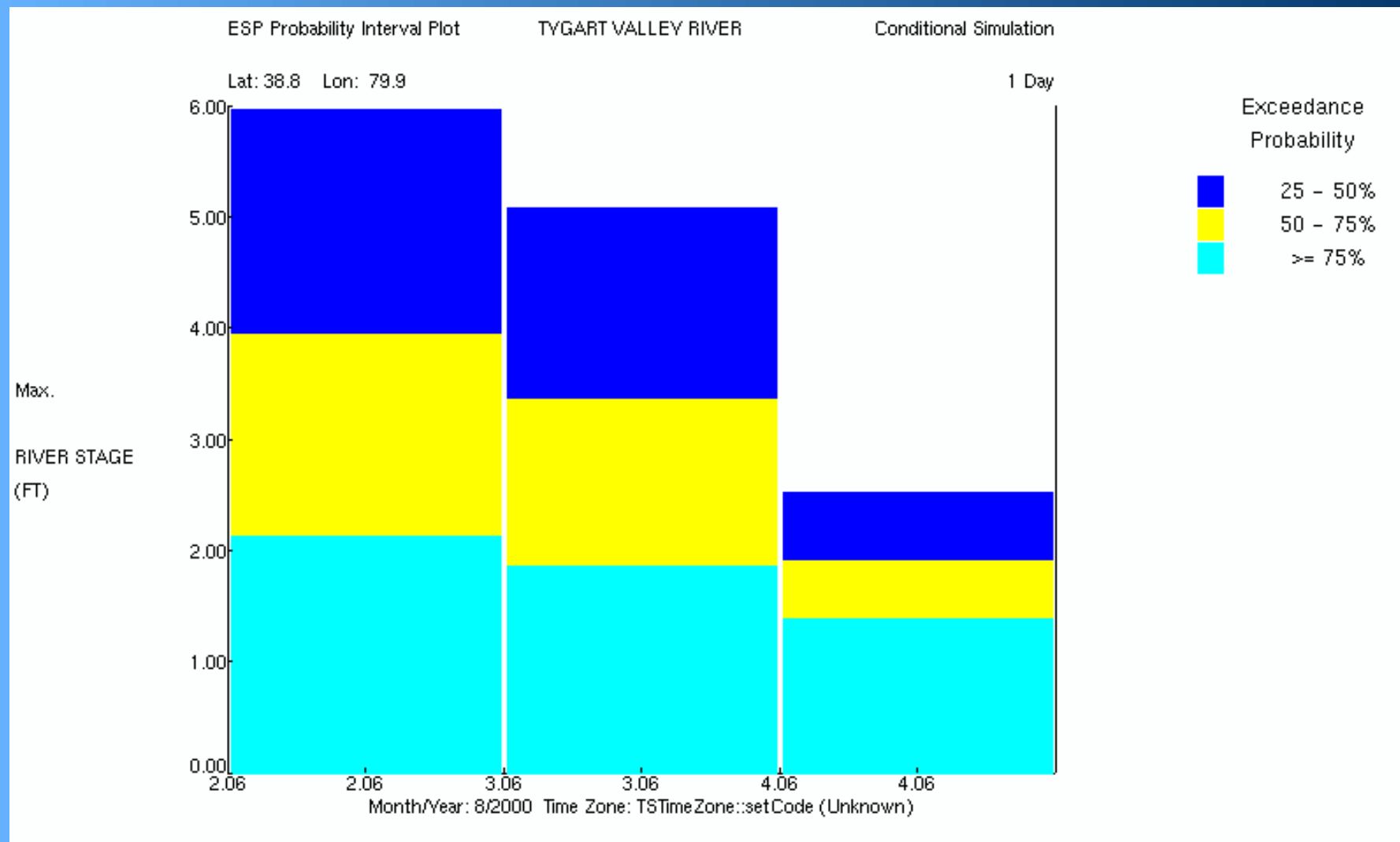


Sample Product

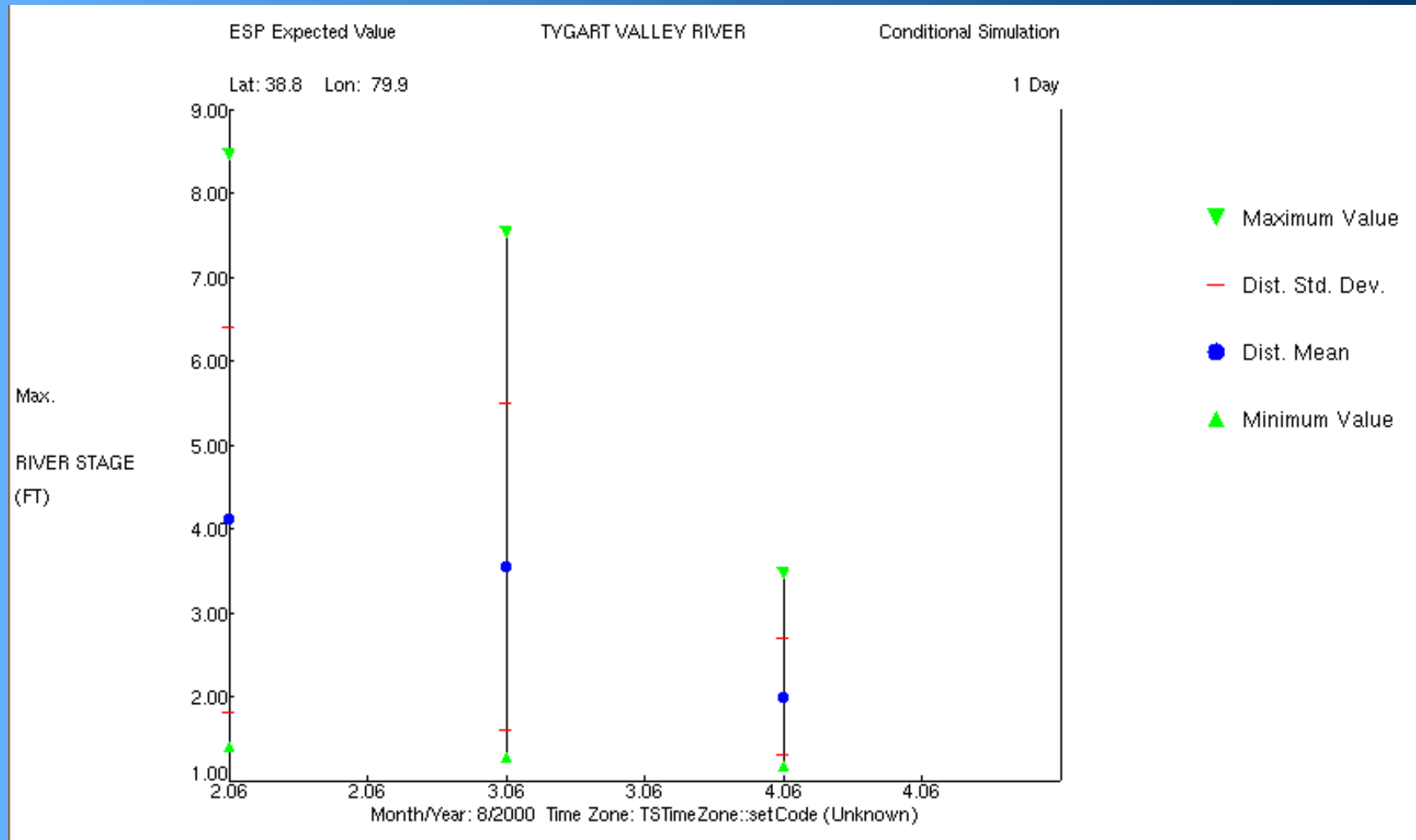
TYGART VALLEY RIVER



Sample Products

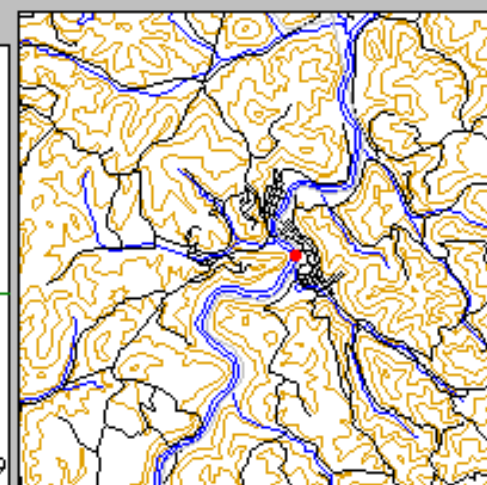
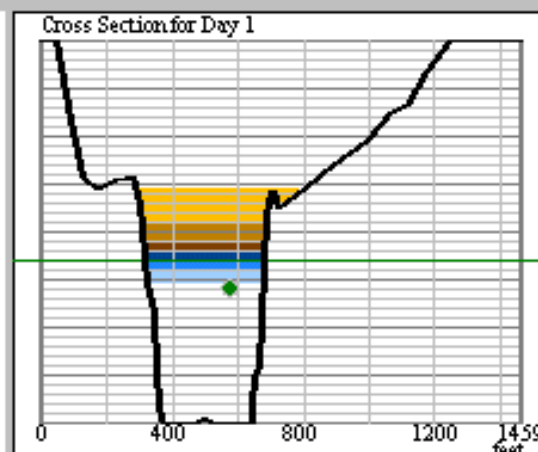
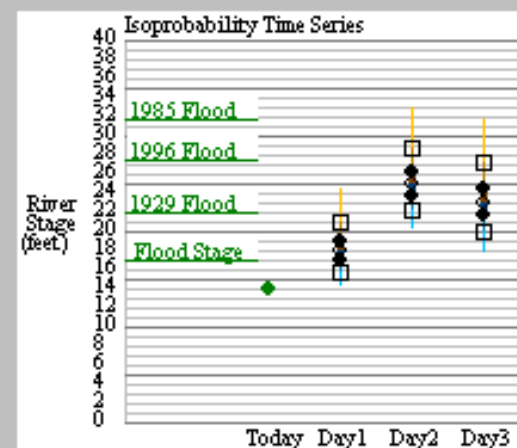
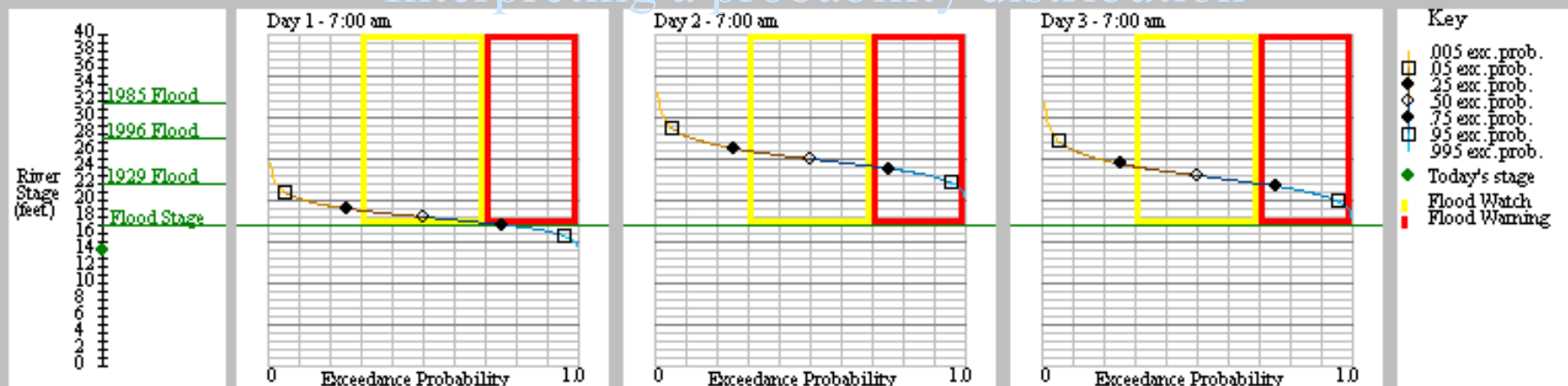


Sample Products



Philippi, WV, Tygart Valley River -- Forecast Prepared: January 1, 2000, 7:00 AM

Interpreting a probability distribution



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